

=> fil reg

FILE 'REGISTRY' ENTERED AT 14:07:17 ON 16 APR 2002
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Jan Delaval
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jan.delaval@uspto.gov

STRUCTURE FILE UPDATES: 15 APR 2002 HIGHEST RN 405259-61-2
DICTIONARY FILE UPDATES: 15 APR 2002 HIGHEST RN 405259-61-2

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

The P indicator for Preparations was not generated for all of the
CAS Registry Numbers that were added to the H/Z/CA/CAPLUS files between
12/27/01 and 1/23/02. Use of the P indicator in online and SDI searches
during this period, either directly appended to a CAS Registry Number
or by qualifying an L-number with /P, may have yielded incomplete results.
As of 1/23/02, the situation has been resolved. Also, note that searches
conducted using the PREP role indicator were not affected.

Customers running searches and/or SDIs in the H/Z/CA/CAPLUS files
incorporating CAS Registry Numbers with the P indicator between 12/27/01
and 1/23/02, are encouraged to re-run these strategies. Contact the
CAS Help Desk at 1-800-848-6533 in North America or 1-614-447-3698,
worldwide, or send an e-mail to help@cas.org for further assistance or to
receive a credit for any duplicate searches.

=> d ide can tot

L80 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2002 ACS
RN 140879-24-9 REGISTRY
CN Proteinase, multicatalytic (9CI) (CA INDEX NAME)
OTHER NAMES:

CN 26 S Protease
CN Immunoproteasome
CN Large multicatalytic protease
CN Multicatalytic protease
CN Multicatalytic proteinase
CN Multicatalytic proteinase complex
CN Organelle, proteasome
CN Prosome
CN Proteasome
CN Tricorn protease
CN Tricorn proteinase
MF Unspecified
CI MAN
SR CA

LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CEN,
CIN, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

3043 REFERENCES IN FILE CA (1967 TO DATE)
23 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3058 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:246130

REFERENCE 2: 136:245552
 REFERENCE 3: 136:245304
 REFERENCE 4: 136:243578
 REFERENCE 5: 136:243346
 REFERENCE 6: 136:242899
 REFERENCE 7: 136:242778
 REFERENCE 8: 136:242516
 REFERENCE 9: 136:241979
 REFERENCE 10: 136:241237

L80 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2002 ACS

RN 133407-86-0 REGISTRY

CN L-Leucinamide, N-[(phenylmethoxy)carbonyl]-L-leucyl-N-[(1S)-1-formylbutyl]-
 (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN L-Leucinamide, N-[(phenylmethoxy)carbonyl]-L-leucyl-N-(1-formylbutyl)-,
 (S)-

OTHER NAMES:

CN MG 115

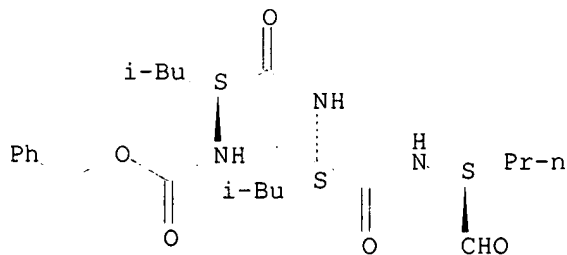
FS STEREOSEARCH

MF C25 H39 N3 O5

SR CA

LC STN Files: ADISINSIGHT, AGRICOLA, BIOSIS, CA, CAPLUS, CHEMCATS,
 TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

27 REFERENCES IN FILE CA (1967 TO DATE)

27 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 135:41674
 REFERENCE 2: 134:331618
 REFERENCE 3: 134:324043
 REFERENCE 4: 134:161376
 REFERENCE 5: 133:317578
 REFERENCE 6: 133:172160
 REFERENCE 7: 133:144585

REFERENCE 8: 132:216685

REFERENCE 9: 132:102860

REFERENCE 10: 131:67760

L80 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2002 ACS

RN 133407-82-6 REGISTRY

CN L-Leucinamide, N-[(phenylmethoxy)carbonyl]-L-leucyl-N-[(1S)-1-formyl-3-methylbutyl]- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN L-Leucinamide, N-[(phenylmethoxy)carbonyl]-L-leucyl-N-(1-formyl-3-methylbutyl)-, (S)-

OTHER NAMES:

CN MG 132

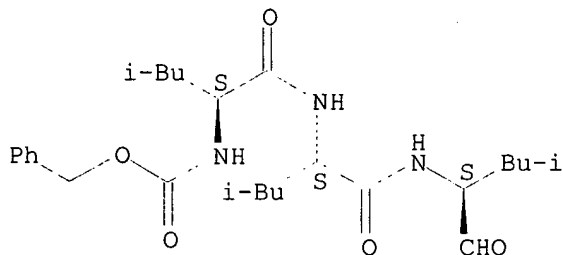
FS STEREOSEARCH

MF C26 H41 N3 O5

SR CA

LC STN Files: AGRICOLA, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CHEMCATS, DRUGUPDATES, EMBASE, MEDLINE, PROMT, TOXCENTER, USPATFULL

Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

115 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

115 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:210571

REFERENCE 2: 136:196263

REFERENCE 3: 136:177734

REFERENCE 4: 136:163836

REFERENCE 5: 136:162808

REFERENCE 6: 136:98078

REFERENCE 7: 136:63751

REFERENCE 8: 136:15055

REFERENCE 9: 135:366970

REFERENCE 10: 135:366416

L80 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2002 ACS

RN 110044-82-1 REGISTRY

CN L-Leucinamide, N-acetyl-L-leucyl-N-[(1S)-1-formylpentyl]- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN L-Leucinamide, N-acetyl-L-leucyl-N-(1-formylpentyl)-, (S)-

OTHER NAMES:

CN 6: PN: WO0002548 PAGE: 30 claimed sequence

CN Calpain inhibitor I

CN CI-1 (peptide)

CN MG 101

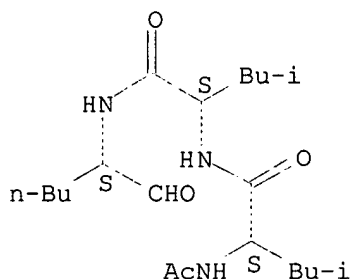
FS STEREOSEARCH

MF C20 H37 N3 O4

SR CA

LC STN Files: AGRICOLA, BIOSIS, CA, CANCERLIT, CAPLUS, CHEMCATS, CSCHEM,
MEDLINE, TOXCENTER, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

147 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

147 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:210352

REFERENCE 2: 136:196263

REFERENCE 3: 136:179494

REFERENCE 4: 136:147461

REFERENCE 5: 136:63726

REFERENCE 6: 136:48202

REFERENCE 7: 136:33120

REFERENCE 8: 136:31378

REFERENCE 9: 135:316995

REFERENCE 10: 135:205291

=> d his

(FILE 'HOME' ENTERED AT 13:27:40 ON 16 APR 2002)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 13:27:51 ON 16 APR 2002

E MG 132/CN

L1 1 S E3

E MG 115/CN

L2 1 S E3

E MG 101/CN

L3 1 S E3

L4 E C26H41N3O5/MF
 30 S E3 AND 46.150.18/RID AND 1/NR
 L5 11 S L4 AND FORMYL
 L6 8 S L5 AND LEUCYL
 L7 6 S L6 NOT ISOLEUCINAMIDE
 L8 5 S L7 AND PHENYLMETHOXY
 E C25H39N3O5/MF
 L9 2 S E3 AND 46.150.18/RID AND 1/NR AND LEUCINAMIDE AND PHENYLMETHO
 E C20H37N3O4/MF
 L10 11 S E3 AND LEUCINAMIDE AND LEUCYL
 L11 5 S L10 AND FORMYL
 L12 9 S L8,L9,L11 NOT L1-L3
 L13 1 S 140879-24-9
 L14 3 S L1-L3
 SEL RN
 L15 0 S E1-E3/CRN

FILE 'HCAPLUS' ENTERED AT 13:33:36 ON 16 APR 2002

L16 241 S L14
 L17 431 S MG() (132 OR 115 OR 101) OR MG132 OR MG115 OR MG101
 L18 157 S CALPAIN INHIBITOR() (1 OR I)
 L19 687 S L16-L18
 L20 25 S L12
 L21 1475 S (PEPTIDE OR PEPTIDYL) (L) (ALDEHYDE OR ALDEHYDIC)
 L22 7 S (PEPTIDE OR PEPTIDYL) (L) EPOXY (L) KETONE
 L23 3055 S L13
 L24 4717 S PROTEASOM?
 L25 304 S (26S OR 26 S) (L) (PROTEASE OR PROTEINASE)
 L26 774 S MULTICATALYTIC (L) (PROTEASE OR PROTEINASE)
 L27 21 S TRICORN (L) (PROTEASE OR PROTEINASE)
 L28 49 S IMMUNOPROTEASOM?
 L29 9 S IMMUNO PROTEASOM?
 L30 105 S PROSOME
 L31 2 S IMMUNOPROTEOSOM?
 L32 2 S IMMUNO PROTEOSOM?
 L33 5020 S L23-L32
 L34 1481 S L21,L22
 L35 694 S L19,L20
 L36 4396 S ALOPEC? OR BALD OR BALDING OR BALDNESS
 L37 3041 S SCALP?
 L38 5442 S HAIR (L) (LOSS OR LOSE OR LOSING OR LOST OR GROW? OF THIN? OR S
 E HAIR/CT
 E E31+ALL
 L39 1419 S E1,E2
 E HAIR/CT
 L40 1409 S E6,E8,E9,E13,E15,E16
 E E37+ALL
 L41 1329 S E1,E2
 E HAIR GROWTH/CT
 E E7+ALL
 E E1
 E E10+ALL
 L42 15395 S E2+NT
 E E9+ALL
 L43 18926 S E6,E5+NT
 L44 824 S E20+NT
 E HAIR/CT
 L45 603 S E24
 L46 40 S E26
 L47 73 S E32
 L48 42 S E39
 L49 56 S E42
 E E26+ALL
 L50 289 S E2
 E HAIR PREPARATION/CT
 L51 4002 S E7,E8,E9,E10,E13,E15-E23

L52 8270 S SHAMPOO?
E KERATIN/CT
E E18+ALL
E E1
E E17+ALL
L53 3 S L35 AND L36-L52
L54 2 S L53 NOT HYPOXIA
L55 7 S L33 AND L36-L52
L56 6 S L34 AND L36-L52
L57 12 S L54-L56
L58 819 S (26S OR 26 S) (L) (PROTEASOM? OR PROTEOSOM?)
L59 4 S L58 AND L36-L52
L60 12 S L57,L59
SEL DN 1 4 5 9 10 11 L60
L61 6 S L60 AND E1-E6
E MUNDY G/AU
L62 259 S E3,E6-E10
E GARRETT I/AU
L63 53 S E3-E7
L64 55 S E239
L65 7 S E309,E310
E GOSSINI G/AU
E ROSSINI G/AU
L66 80 S E3-E16
L67 2 S L35 AND L62-L66
L68 1 S L34 AND L62-L66
L69 4 S L33 AND L62-L66
L70 8 S L61,L67-L69
E OSTEOSCREEN/PA,CS
L71 13 S E3-E12
L72 3 S L71 AND L33-L35
L73 8 S L70,L72
L74 7 S L73 AND (HAIR OR BALD? OR ALOPEC? OR SHAMPOO OR FOLLIC? OR SH
L75 8 S L73,L74
L76 2 S L75 AND (GROWTH FACTOR) (L) (EPIDERM? OR FIBROBLAST? OR PLATELE
L77 0 S L75 AND (PARATHYROID OR LEUKEM?)
L78 3 S L75 AND GROWTH? FACTOR?
L79 8 S L75,L76,L78
SEL HIT RN

FILE 'REGISTRY' ENTERED AT 14:06:56 ON 16 APR 2002

L80 4 S E1-E4

FILE 'REGISTRY' ENTERED AT 14:07:17 ON 16 APR 2002

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 14:07:28 ON 16 APR 2002

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FILE COVERS 1907 - 16 Apr 2002 VOL 136 ISS 16

FILE LAST UPDATED: 14 Apr 2002 (20020414/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAPLUS files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

=> d all hitstr tot 179

L79 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:300537 HCAPLUS

DN 134:331618

TI Inhibitors of **proteasomal** activity for stimulating bone and **hair growth**

IN Mundy, Gregory R.; Garrett, Ross I.; Rossini, G.

PA Osteoscreen, Inc., USA

SO PCT Int. Appl., 57 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K038-06

ICS A61K038-07; A61K038-13; A61K031-165; A61K031-365; A61K031-4015; A61K031-522; A61P019-00; A61P043-00

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1, 62

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001028579	A2	20010426	WO 2000-US41360	20001020
	WO 2001028579	A3	20010920		
	W:	AU, CA, JP			
	RW:	AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			

PRAI US 1999-421545 A 19991020

US 2000-558973 A 20000425

AB Compds. that inhibit the activity of NF- κ B or inhibit the activity of the **proteasome** or both promote bone formation and **hair growth** and are thus useful in treating osteoporosis, bone fracture or deficiency, primary or secondary hyperparathyroidism, periodontal disease or defect, metastatic bone disease, osteolytic bone disease, post-plastic surgery, post-prosthetic joint surgery, and post-dental implantation; they also stimulate the prodn. of **hair follicles** and are thus useful in stimulating **hair growth**, including **hair d.**, in subject where this is desirable. N-carbobenzoyl-Ile-Glu-(OtBu)Ala-Leu-CHO (PSI) in 50% propylene glycol, 10% DMSO, and 40% water was injected daily for 5 days (1mg/kg body wt./day) into the s.c. tissue of mice and the tissue was examd. histol. 16 days later. The no. of **hair follicles** increased and the downward extension of these **hair follicles** into the dermal tissue was noted, which are hallmarks of anagen. There was an obvious increase in size of the **follicle diam.** and the root **sheath diam.**

ST **proteasome** inhibitor **hair bone growth** stimulant

IT Transcription factors

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(Uses)
 (I.kappa.B (inhibitor of NF-.kappa.B); inhibitors of
proteasomal activity for stimulating bone and **hair**
growth)

IT Periodontium
 Tooth
 (disease; inhibitors of **proteasomal** activity for stimulating
 bone and **hair growth**)

IT **Hair**
 (follicle; inhibitors of **proteasomal** activity for
 stimulating bone and **hair growth**)

IT Bone, disease
 (fracture; inhibitors of **proteasomal** activity for stimulating
 bone and **hair growth**)

IT Bone
Hair preparations
 (growth stimulants; inhibitors of
proteasomal activity for stimulating bone and **hair**
growth)

IT Dental materials and appliances
 (implants; inhibitors of **proteasomal** activity for stimulating
 bone and **hair growth**)

IT Bone formation
 (inhibitors of **proteasomal** activity for stimulating bone and
hair growth)

IT Bone morphogenetic proteins
 Estrogens
Growth factors, animal
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (inhibitors of **proteasomal** activity for stimulating bone and
hair growth)

IT Bone, disease
 (metastatic and osteolytic; inhibitors of **proteasomal**
 activity for stimulating bone and **hair growth**)

IT **Growth factors, animal**
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (osteogenins; inhibitors of **proteasomal** activity for
 stimulating bone and **hair growth**)

IT Surgery
 (post-plastic; inhibitors of **proteasomal** activity for
 stimulating bone and **hair growth**)

IT Hyperparathyroidism
 (secondary; inhibitors of **proteasomal** activity for
 stimulating bone and **hair growth**)

IT Joint, anatomical
 (surgery of; inhibitors of **proteasomal** activity for
 stimulating bone and **hair growth**)

IT Osteoporosis
 (therapeutic agents; inhibitors of **proteasomal** activity for
 stimulating bone and **hair growth**)

IT 13598-36-2D, Phosphonic acid, alkylidenebis- derivs.
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (bisphosphonate; inhibitors of **proteasomal** activity for
 stimulating bone and **hair growth**)

IT 67-99-2, Gliotoxin 404-86-4, Capsaicin 6493-05-6, PTX 9035-81-8,
 Trypsin inhibitor 25769-03-3, PDTC 59865-13-3, Cyclosporin a
 65240-86-0, PPM 18 79902-63-9, Simvastatin 110044-82-1
 110115-07-6 133343-34-7, Lactacystin 133407-82-6, MG
 132 133407-86-0, MG 115
 134381-21-8, Epoxomicin 158442-41-2D, PSI, epoxides 179324-22-2, MG

262 179324-69-7, PS 341 336099-20-8 336099-21-9 336608-38-9, Bay 11-7082

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(inhibitors of **proteasomal** activity for stimulating bone and **hair growth**)

IT 9028-35-7, NADPH-hydroxymethylglutaryl-CoA reductase

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(inhibitors, statins; inhibitors of **proteasomal** activity for stimulating bone and **hair growth**)

IT 140879-24-9, **Proteasome**

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(inhibitors; inhibitors of **proteasomal** activity for stimulating bone and **hair growth**)

IT 110044-82-1 133407-82-6, MG 132

133407-86-0, MG 115

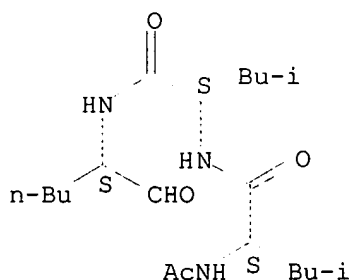
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(inhibitors of **proteasomal** activity for stimulating bone and **hair growth**)

RN 110044-82-1 HCAPLUS

CN L-Leucinamide, N-acetyl-L-leucyl-N-[(1S)-1-formylpentyl]- (9CI) (CA INDEX NAME)

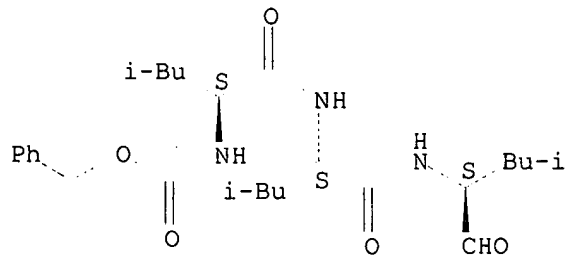
Absolute stereochemistry.



RN 133407-82-6 HCAPLUS

CN L-Leucinamide, N-[(phenylmethoxy)carbonyl]-L-leucyl-N-[(1S)-1-formyl-3-methylbutyl]- (9CI) (CA INDEX NAME)

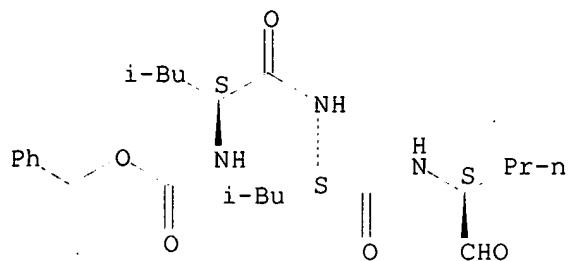
Absolute stereochemistry. Rotation (-).



RN 133407-86-0 HCAPLUS

CN L-Leucinamide, N-[(phenylmethoxy)carbonyl]-L-leucyl-N-[(1S)-1-formylbutyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 140879-24-9, **Proteasome**
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (inhibitors; inhibitors of **proteasomal** activity for
 stimulating bone and **hair growth**)
 RN 140879-24-9 HCAPLUS
 CN Proteinase, multicatalytic (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2002 ACS
 AN 2000:741943 HCAPLUS
 DN 133:291099
 TI Treatment of myeloma bone disease with **proteasomal** and
 NF-.kappa.B activity inhibitors
 IN Mundy, Gregory R.
 PA Osteoscreen, Inc., USA
 SO PCT Int. Appl., 22 pp.
 CODEN: PIXXD2

DT Patent
 LA English
 IC ICM A61K038-04
 ICS A61K031-40; A61K031-166; A61P019-08
 CC 1-6 (Pharmacology)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000061167	A2	20001019	WO 2000-US9121	20000407
	WO 2000061167	A3	20010111		
	W: AU, CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1169049	A2	20020109	EP 2000-921764	20000407
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1999-289229	A	19990409		
	WO 2000-US9121	W	20000407		
AB	The present invention involves the identification and use of compns. for treating myeloma bone disease. The compns. inhibit proteasomal activity and decrease the activity of the transcription factor NF-.kappa.B. Assessment of a candidate compd. for its ability to inhibit prodn. or activity of proteasomal enzymes or NF-.kappa.B provides a useful means to identify agents to treat myeloma bone disease.				
ST	bone myeloma therapy proteasome NFkappaB inhibitor; proteasome inhibitor bone myeloma therapy; NF kappaB inhibitor bone myeloma therapy				
IT	Transcription factors RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (NF-.kappa.B (nuclear factor .kappa.B); treatment of myeloma bone disease with proteasomal and NF-.kappa.B activity inhibitors)				
IT	Antitumor agents (multiple myeloma; treatment of myeloma bone disease with proteasomal and NF-.kappa.B activity inhibitors)				
IT	5108-96-3	65240-86-0, Ppm-18	158442-41-2		

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(treatment of myeloma bone disease with **proteasomal** and NF-.kappa.B activity inhibitors)

IT 140879-24-9, **Proteasome**

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(treatment of myeloma bone disease with **proteasomal** and NF-.kappa.B activity inhibitors)

IT 140879-24-9, **Proteasome**

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(treatment of myeloma bone disease with **proteasomal** and NF-.kappa.B activity inhibitors)

RN 140879-24-9 HCAPLUS

CN Proteinase, multicatalytic (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:478627 HCAPLUS

DN 133:247623

TI Patterns of gene expression associated with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A

AU Ji, Xiaohui; Chen, Di; Xu, Chi; Harris, Steve E.; Mundy, Gregory

R.; Yoneda, Toshiyuki

CS Division of Endocrinology and Metabolism, Department of Medicine, University of Texas Health Science Center at San Antonio, San Antonio, TX, USA

SO Journal of Bone and Mineral Metabolism (2000), 18(3), 132-139

CODEN: JBMME4; ISSN: 0914-8779

PB Springer-Verlag Tokyo

DT Journal

LA English

CC 2-10 (Mammalian Hormones)

AB The pluripotent mesenchymal stem cells give rise to osteoblasts, adipocytes, chondrocytes, and myoblasts. The differentiation of these stem cells into each of the mature functional cells may be controlled by a distinctive master gene(s) and is assocd. with temporal and spatial expression of diverse genes. Identification of genes that are expressed during the differentiation of the mesenchymal cells to osteoblasts is, therefore, important to obtain insights into the mol. mechanisms of osteogenesis. The murine undifferentiated mesenchymal cell 3T3-F442A, when treated with the bone morphogenetic protein 2 (BMP-2), a well-characterized inducer of mesenchymal cell differentiation, exhibited both osteoblastic and adipocytic differentiation. Using the SAGE (serial anal. of gene expression) technique, which has been shown to enable quant. anal. of large nos. of genes in a simple and quick manner, the authors obtained 1600 sequence tags representing 2107 individual nucleotide sequences from control and BMP-2-treated 3T3-F442A cells, resp. By comparing the frequency of tag occurrence, the authors found profiles of up- or downregulated genes assocd. with osteoblast or adipocyte phenotype such as type I collagen, osteonectin and OSF-2, or C/EBP.beta., aP2, fatty acid synthase, and lipoprotein lipase, resp., in BMP-2-treated 3T3-F442A cells. The authors' data show that BMP-2 induces not only osteoblastic but also adipocytic differentiation in the 3T3-F442A cells. They also show that the 3T3-F442A cells have bipotentials of differentiating toward osteoblasts and adipocytes. The results, therefore, might explain the inverse correlation between trabecular bone vol. and fat vol. in the bone marrow cavity. The results also suggest that the SAGE may be a useful technique that allows a fast and efficient way to generate global and local views of gene expression assocd. with cellular differentiation of the mesenchymal stem cells.

ST BMP2 gene expression osteoblast adipocyte differentiation

IT Bone morphogenetic proteins

- RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(2; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Antigenes
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(AD1; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Chaperonins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(ADP ribosylation factor-like protein 2; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(AP-2 (activator protein 2); patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT RNA formation factors
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(C/EBP-.beta. (CCAAT box/enhancer element-binding protein .beta.); patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(Cis2; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT G proteins (guanine nucleotide-binding proteins)
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(Gs (adenylate cyclase-stimulating), .alpha.-subunit; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Histones
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(H2A; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Heat-shock proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(HSC73; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(J1; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM

(Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(L12; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(L22; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(L32; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(L37a; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(L5; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(OSF-2 (osteoblast-specific factor-2); patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(S16; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(S2, S28; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(S24; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(S29; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(TNF-induced protein complex .gamma.; patterns of gene expression

assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Phosphoproteins

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(acidic ribosomal protein P2; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Phosphoproteins

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(acidic ribosomal, P1; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Phosphoproteins

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(acidic ribosomal, P0; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Phosphoproteins

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(adducins, human erythrocyte, .alpha.-subunit; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Adipose tissue

(adipocyte, differentiation; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Cell differentiation

(adipocyte; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Proteins, specific or class

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(calcylin; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Proteins, specific or class

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(calgizzarins; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Chaperonins

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(chaperone CCTB; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Osteoblast

(differentiation; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

IT Ribosomal proteins

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation,

- nonpreparative); PROC (Process)
(human ribosomal protein S20; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(human ribosomal protein S7; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(hydrophobic protein MTF; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(insulin-stimulated eIF-4E binding protein; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(jesolin; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(junB; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(minopontins; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(mitochondrial ATPase inhibitor; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Cell differentiation
(osteoblast; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(p68-c-rel; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Bone formation
(patterns of gene expression assocd. with BMP-2-induced osteoblast and

- adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Gene, animal
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Chloride channel
Fibroblast growth factor receptors
Macrophage migration inhibitory factor
Osteonectin
Ribosomal proteins
Tau factor
Tubulins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(protein for hereditary multiple exostosis; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(rat brain protein; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(rat ribosomal protein L23A; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(rat ribosomal protein S19; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Ribosomal proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(rpA2; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Embryo, animal
(stem cell; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Collagens, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(type I; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT Anion channel
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM

- (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(voltage-dependent 3; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT G proteins (guanine nucleotide-binding proteins)
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(.beta.-subunit; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT 140879-24-9, **Proteasome**
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(Rc7-I; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT 147014-97-9, CDK4 kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(inhibitor; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT 9004-02-8, Lipoprotein lipase 9007-43-6, Cytochrome c, biological studies 9036-37-7, Aminolevulinic acid dehydrogenase 9045-77-6, Fatty acid synthase 9059-25-0, Lysyl oxidase 9059-32-9, GTPase 60616-82-2, Cathepsin L
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT 9001-16-5, Cytochrome c oxidase
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(subunit VIII; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)
- IT 37205-63-3, ATP synthase
RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(.gamma.-chain precursor and hydrogen-transporting; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Bishop, J; Nature 1974, V250, P199 HCAPLUS
- (2) Burkhardt, R; Bone 1987, V8, P157 MEDLINE
- (3) Chen, D; Mol Cell Differ 1995, V3, P193 HCAPLUS
- (4) Davidson, E; Science 1979, V204, P1052 HCAPLUS
- (5) Dimaculangan, D; Differentiation 1994, V58, P47 HCAPLUS
- (6) Ghosh-Choudhury, N; Endocrinology 1996, V137, P331 HCAPLUS
- (7) Green, H; Cell 1976, V7, P105 HCAPLUS
- (8) Harris, S; Mol Cell Differ 1995, V3, P137 HCAPLUS
- (9) Hogan, B; Curr Opin Genet Dev 1996, V6, P432 HCAPLUS
- (10) Kato, Y; J Bone Miner Res 1997, V12, P2014 HCAPLUS
- (11) Mansukhani, A; Proc Natl Acad Sci USA 1990, V87, P4378 HCAPLUS
- (12) Martin, R; Calcif Tiss Int 1990, V46, P189 MEDLINE
- (13) Meunier, P; Clin Orthop Relat Res 1971, V80, P147 MEDLINE
- (14) Owen, M; Bone and Mineral Research 1985, V3, P1
- (15) Preece, A; Manual for Histologic Technicians 1972, P1

- (16) Prockop, D; Science 1997, V276, P71 HCAPLUS
- (17) Spiegelman, B; Cell 1996, V87, P377 HCAPLUS
- (18) Spiegelman, B; J Biol Chem 1983, V258, P10083 HCAPLUS
- (19) Takeshita, S; Biochem J 1993, V294, P271 HCAPLUS
- (20) Thies, R; Endocrinology 1992, V130, P1318 HCAPLUS
- (21) Velculescu, V; Cell 1997, V88, P243 HCAPLUS
- (22) Velculescu, V; Science 1995, V270, P484 HCAPLUS
- (23) Wang, E; Growth Factors 1993, V9, P57 MEDLINE
- (24) Wang, E; Proc Natl Acad Sci USA 1990, V87, P2220 HCAPLUS
- (25) Webster, M; Trends Genet 1997, V13, P172
- (26) Wu, Z; Genes Dev 1995, V9, P2350 HCAPLUS
- (27) Wu, Z; Mol Cell Biol 1996, V16, P4128 HCAPLUS
- (28) Xu, C; Endocrinology 1996, V137, P3557 HCAPLUS
- (29) Xu, R; Proc Natl Acad Sci USA 1996, V93, P834 HCAPLUS
- (30) Zhang, L; Science 1996, V276, P1268

IT 140879-24-9, Proteasome

RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
 (Rc7-I; patterns of gene expression assocd. with BMP-2-induced osteoblast and adipocyte differentiation of mesenchymal progenitor cell 3T3-F442A)

RN 140879-24-9 HCAPLUS

CN Proteinase, multicatalytic (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:53374 HCAPLUS

DN 132:102860

TI Inhibitors of proteasomal activity for stimulating bone and hair growth

IN Mundy, Gregory R.; Garrett, I. Ross; Rossini, G.

PA Osteoscreen, USA

SO PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K031-00

CC 1-12 (Pharmacology)

Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002548	A2	20000120	WO 1999-US15533	19990709
	W: AL, AM, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, SD, SG, SI, SK, TR, TT, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9963109	A1	20000201	AU 1999-63109	19990709
	EP 1096924	A1	20010509	EP 1999-933827	19990709
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1998-113947	A1	19980710		
	WO 1999-US15533	W	19990709		

AB Compds. that inhibit the activity of NF- κ B or inhibit the activity of the proteasome or both promote bone formation and hair growth and are thus useful in treating osteoporosis, bone fracture or deficiency, primary or secondary hyperparathyroidism, periodontal disease or defect, metastatic bone disease, osteolytic bone disease, post-plastic surgery, post-prosthetic joint surgery, and post-dental implantation. They also stimulate the

prodn. of hair follicles and are thus useful in stimulating hair growth, including hair d., in subject where this is desirable.

ST hair bone growth stimulation NFkappaB inhibitor; proteasome inhibitor hair bone growth stimulation

IT Transcription factors
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (NF-.kappa.B (nuclear factor .kappa.B); NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth)

IT Bone formation
 Drug delivery systems
 Drug screening
 (NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth)

IT Bone morphogenetic proteins
 Estrogens
 Growth factors, animal
 Hormones, animal, biological studies
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth, and use with other agents)

IT Antitumor agents
 (bone, metastasis; NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth)

IT Skull
 (calvarium, calvarial bone growth assay; NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth)

IT Cartilage
 (cartilage-derived morphogenetic proteins; NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth, and use with other agents)

IT Joint, anatomical
 (degeneration; NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth)

IT Disease, animal
 (dental; NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth)

IT Periodontium
 (disease; NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth)

IT Hair
 (follicle; NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth)

IT Bone, disease
 (fracture, and bone deficiency; NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth)

IT Bone
 (growth promoters; NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth, and use with other agents)

IT Hair preparations
 (growth stimulants; NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth)

IT Dental materials and appliances

- (implants, post-dental implantation; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth)
- IT Cell differentiation
(inducers; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth, and use with other agents)
- IT Bone, neoplasm
(inhibitors, metastasis; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth)
- IT Bone, neoplasm
(metastasis, inhibitors; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth)
- IT Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(morphogenetic, cartilage-derived; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth, and use with other agents)
- IT Growth factors, animal
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(osteogenins; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth, and use with other agents)
- IT Bone, disease
(osteolytic; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth)
- IT Isoprenoids
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(pathway; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth)
- IT Peptides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptidic aldehydes; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth)
- IT Aldehydes, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptidyl; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth)
- IT Surgery
(plastic, post-plastic surgery; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth)
- IT Joint, anatomical
Prosthetic materials and Prosthetics
(post-prosthetic joint surgery; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth)
- IT Hyperparathyroidism
(primary; NF-.kappa.B inhibitors and inhibitors of **proteasomal** activity for stimulating bone and hair growth)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

IT Bone
(resorption, inhibitors; NF-.kappa.B inhibitors and inhibitors of
proteasomal activity for stimulating bone and **hair**
growth, and use with other agents)

IT Hyperparathyroidism
(secondary; NF-.kappa.B inhibitors and inhibitors of
proteasomal activity for stimulating bone and **hair**
growth)

IT Osteoporosis
(therapeutic agents; NF-.kappa.B inhibitors and inhibitors of
proteasomal activity for stimulating bone and **hair**
growth)

IT Drug delivery systems
(topical; NF-.kappa.B inhibitors and inhibitors of **proteasomal**
activity for stimulating bone and **hair growth**)

IT 67-99-2, Gliotoxin 404-86-4, Capsaicin 6493-05-6, Pentoxifylline
59865-13-3, Cyclosporin A 79902-63-9, Simvastatin 106096-93-9, Basic
fibroblast growth factor 110044-82-1
110115-07-6 133343-34-7, Lactacystin 133407-82-6, MG
132 133407-86-0, MG 115
158442-41-2 179324-22-2, MG 262
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
(Uses)
(NF-.kappa.B inhibitors and inhibitors of **proteasomal**
activity for stimulating bone and **hair growth**)

IT 140879-24-9, **Proteasome**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(NF-.kappa.B inhibitors and inhibitors of **proteasomal**
activity for stimulating bone and **hair growth**)

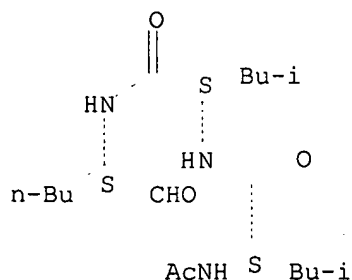
IT 13598-36-2D, Phosphonic acid, bisphosphonates
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
(Uses)
(and statins; NF-.kappa.B inhibitors and inhibitors of
proteasomal activity for stimulating bone and **hair**
growth, and use with other agents)

IT 110044-82-1 133407-82-6, MG 132
133407-86-0, MG 115
RL: BAC (Biological activity or effector, except adverse); BSU (Biological
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
(Uses)
(NF-.kappa.B inhibitors and inhibitors of **proteasomal**
activity for stimulating bone and **hair growth**)

RN 110044-82-1 HCAPLUS

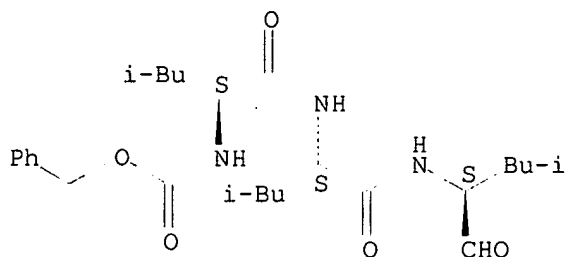
CN L-Leucinamide, N-acetyl-L-leucyl-N-[(1S)-1-formylpentyl]- (9CI) (CA INDEX
NAME)

Absolute stereochemistry.



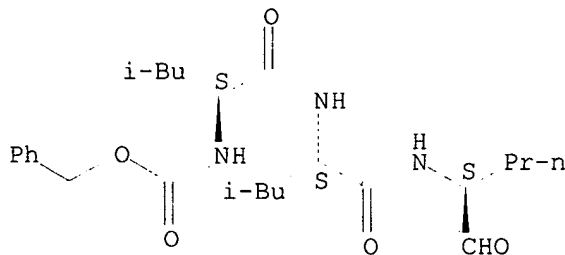
RN 133407-82-6 HCAPLUS
 CN L-Leucinamide, N-[(phenylmethoxy)carbonyl]-L-leucyl-N-[(1S)-1-formyl-3-methylbutyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 133407-86-0 HCAPLUS
 CN L-Leucinamide, N-[(phenylmethoxy)carbonyl]-L-leucyl-N-[(1S)-1-formylbutyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 140879-24-9, Proteasome
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (NF-.kappa.B inhibitors and inhibitors of proteasomal activity for stimulating bone and hair growth)
 RN 140879-24-9 HCAPLUS
 CN Proteinase, multicatalytic (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2002 ACS
 AN 1999:565931 HCAPLUS
 DN 131:183878
 TI Methods for diagnosing and treating autoimmune disease
 IN Faustman, Denise L.; Hayashi, Takuma
 PA The General Hospital Corporation, USA
 SO PCT Int. Appl., 150 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K038-51
 ICS A61K031-70; C12N009-12; G01N033-564; G01N033-573
 CC 15-8 (Immunochemistry)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9943346	A1	19990902	WO 1999-US4301	19990225
	W: CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1064020	A1	20010103	EP 1999-911010	19990225
	R: DE, FR, GB				

PRAI US 1998-31629 A 19980227
 WO 1999-US4301 W 19990225

AB The invention provides a method of detecting autoimmune disease in a mammal, comprising providing a biol. sample from a mammal and detecting **proteasome** activity, wherein a redn. in **proteasome** activity from a basal state is indicative of autoimmune disease. In addn., the invention encompasses a method of treating an autoimmune disease in a mammal, comprising administering to a mammal suspected of suffering from an autoimmune disease an agent which restores NF-.kappa.B activity in an amt. and for a time sufficient to result in normal NF-.kappa.B activity in the mammal.

ST NFkB restoring agent **proteasome** autoimmune disease

IT Proteins, specific or class
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (200,000-mol.-wt., erythrocyte **proteasome** inhibitor I.kappa.B; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT Proteins, specific or class
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (240,000-mol.-wt. erythrocyte **proteasome** inhibitor CF-2; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT Apolipoproteins
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (B-100; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT Intestine, disease
 (Crohn's; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT Selectins
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (E-; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT Enzymes, biological studies
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (E2 (ubiquitin-carrier); detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT Muscle, disease
 (Eaton-Lambert syndrome; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT Kidney, disease
 (Goodpasture's syndrome; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT Nervous system
 (Guillain-Barre syndrome; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT Histocompatibility antigens
 RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
 (HLA, class II; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT Disease, animal
 (HLA-II-linked; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT Purpura (disease)
 (Henoch-Schoenlein's; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

- IT Kidney, disease
(IgA nephropathy, idiopathic; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(I.kappa.B (inhibitor of NF-.kappa.B); detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Proteins, specific or class
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LMP-2 (latent-infection membrane protein 2); detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Transcription factors
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(NF-.kappa.B (nuclear factor .kappa.B), p50 subunit; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Transcription factors
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(NF-.kappa.B (nuclear factor .kappa.B), p52 subunit; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Transcription factors
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(NF-.kappa.B (nuclear factor .kappa.B), p65 subunit; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(NF-.kappa.B (nuclear factor .kappa.B); detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Arthritis
(Reiter's syndrome; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Transcription factors
RL: ADV (Adverse effect, including toxicity); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(STAT, activity redn.; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Transcription factors
RL: ADV (Adverse effect, including toxicity); REM (Removal or disposal); BIOL (Biological study); PROC (Process)
(TFIIH activity redn.; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Kidney, disease
(acute glomerulonephritis; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Hypoparathyroidism
(adult-onset idiopathic; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Nervous system
(amyotrophic lateral sclerosis; detn. of **proteasome** activity

- for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Spinal column
(ankylosing spondylitis; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Anemia (disease)
(aplastic, autoimmune; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Artery, disease
(arteritis, giant cell; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Antibodies
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(autoantibodies; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Anemia (disease)
(autoimmune hemolytic anemia; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Thyroid gland, disease
(autoimmune thyroiditis; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Addison's disease
Animal tissue
Autoimmune disease
Behcet's syndrome
Celiac disease
Dermatomyositis
Diabetes mellitus
Graves' disease
Hemochromatosis
Lupus erythematosus
Multiple sclerosis
Myasthenia gravis
Psoriasis
Rheumatoid arthritis
Sjogren's syndrome
Vitiligo
(detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Proteins, general, analysis
RL: AMX (Analytical matrix); ANST (Analytical study)
(detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Nucleic acids
RL: AMX (Analytical matrix); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Antibodies
Antisense RNA
Cell adhesion molecules
Cyclins
Interleukin 2
Interleukin 6
Ribozymes
Tumor necrosis factors
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

- (detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Heart, disease
(dilated cardiomyopathy; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Endocrine system
(disease, poly-; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Eosinophilia
(eosinophilia-myalgia syndrome; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Skin, disease
(epidermolysis bullosa; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Kidney, disease
(glomerulonephritis, rapidly-progressive; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Transplant and Transplantation
(graft-vs.-host reaction; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Mammal (Mammalia)
(human; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Diabetes mellitus
(insulin-dependent; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Rheumatoid arthritis
(juvenile; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Skin, disease
(linear IgA; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Proteins, specific or class
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(membrane, Lmp-7; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Heart, disease
(myocarditis; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Sleep
(narcolepsy; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Kidney, disease
(nephrotic syndrome; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(p100; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(p105; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Skin, disease
(pemphigoid; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

- IT Skin, disease
(pemphigus; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Nerve, disease
(peripheral neuropathy; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Autoimmune disease
(polyglandular syndrome type I; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Muscle, disease
(polymyositis; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Erythrocyte
(**proteasome** inhibitors; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Phosphorylation, biological
(protein; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Cell cycle
(restoration; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Connective tissue
(scleroderma, CREST syndrome variant; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Connective tissue
(scleroderma; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Biliary tract
(sclerosing cholangitis; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Muscle, disease
(stiff-man syndrome; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Thyroid gland, disease
(thyroiditis; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Alopecia
(totalis; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Enzymes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ubiquitin-activating; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Enzymes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ubiquitin-conjugating; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Intestine, disease
(ulcerative colitis; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Blood vessel, disease
(vasculitis, necrotizing; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)
- IT Hepatitis
(viral, chronic active; detn. of **proteasome** activity for diagnosis and NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

diseases)

IT Interferons
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.; detn. of **proteasome** activity for diagnosis and
NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT 140879-24-9, **Proteasome**
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(detn. of **proteasome** activity for diagnosis and
NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

IT 9026-43-1, Protein kinase 143011-72-7, G-CSF
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(detn. of **proteasome** activity for diagnosis and
NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Faustman; US 5538854 A 1996 HCAPLUS
(2) Kwon; Diabetes 1998, V47, P583 HCAPLUS

IT 140879-24-9, **Proteasome**
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(detn. of **proteasome** activity for diagnosis and
NF-.kappa.B-restoring agent for treatment of autoimmune diseases)

RN 140879-24-9 HCAPLUS

CN Proteinase, multicatalytic (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 1996:746318 HCAPLUS

DN 126:16248

TI Purification and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy

IN Miller, Douglas K.; Thornberry, Nancy A.; Nicholson, Donald W.; Ali, Ambereen; Vaillancourt, John P.

PA Merck and Co., Inc., USA; Merck Frosst Canada Inc.; Miller, Douglas K.; Thornberry, Nancy A.; Nicholson, Donald W.; Ali, Ambereen; Vaillancourt, John P.

SO PCT Int. Appl., 83 pp

CODEN: PIXXD2

DT Patent

LA English

IC ICM C12N009-50

ICS C12N009-64

CC 7-2 (Enzymes)

Section cross-reference(s): 3, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9633268	A1	19961024	WO 1996-US5282	19960417
	W: CA, JP, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2218679	AA	19961024	CA 1996-2218679	19960417
	EP 822983	A1	19980211	EP 1996-913801	19960417
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
	JP 11504209	T2	19990420	JP 1996-531866	19960417
PRAI	US 1995-426557		19950421		
	WO 1996-US5282		19960417		
OS	MARPAT 126:16248				
AB	The present invention is directed to an isolated and purified enzyme designated apopain, methods of using apopain to screen for compds. which modulate the activity of apopain, and compds. identified by the screens. Thus, a poly(ADP-ribose) polymerase cleavage activity (apopain) was detected in progressively apoptotic human osteosarcoma cells. Apopain was				

purified and structural anal. showed it to comprise 2 subunits (p17 and p12) proteolytically processed from the 32-kDa CPP32 precursor by cleavage at the Asp28-Ser29 and Asp175-Ser176 positions. A synthetic DNA mol. encoding full-length apopain is prepd. from the purified enzyme. The synthetic apopain-encoding DNA is formulated so as to optimize expression in a variety of recombinant hosts. The DNA clones produce recombinant full-length apopain and derivs. thereof. Purified native apopain and recombinant apopain are useful for identifying modulators of apopain activity and hence modifier of pathol. conditions related to the pro-inflammatory or pro-apoptotic effects of apopain. Thus, the tetrapeptide **aldehyde** inhibitor Ac-YVAD-CHO acts with a K_i of <1 nM, making it among the most potent **peptide aldehydes** known for a cysteine proteinase. The synthesis of Ac-YVAD-CHO is described in detail, and can be generally applied for the synthesis of other **peptidyl** inhibitors. Apopain antisense mols. are useful for therapeutically reducing or eliminating the pro-inflammatory or pro-apoptotic effects of apopain, whereas gene transplantation or gene therapy with apopain is useful for enhancing the pro-inflammatory or pro-apoptotic effects of apopain. These therapies are beneficial in the treatment of immune, proliferative and degenerative diseases including, but not limited to, immune deficiency syndromes (such as AIDS), autoimmune diseases, pathogenic infections, cardiovascular and neurol. injury, **alopecia**, aging, cancer, Parkinson's disease and Alzheimer's disease.

- ST human apopain purifn cloning modulation; sequence apopain human
- IT Apoptosis
 - (control of; purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT Protein sequences
 - (of human pro-apoptotic cysteine proteinase, apopain)
- IT **Aldehydes**, biological studies
 - RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 - (**peptide aldehydes**; purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by **peptidyl** inhibitors or gene therapy)
- IT Antitumor agents
 - Drugs
 - Enzyme kinetics
 - Gene therapy
 - Michaelis constant
 - Molecular cloning
 - Transformation (genetic)
 - (purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT Antibodies
 - RL: BSU (Biological study, unclassified); BIOL (Biological study)
 - (purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT Synthetic genes
 - RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
 - (purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT Antisense DNA
 - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 - (purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT Aging (animal)
 - Alopecia**
 - Alzheimer's disease

Autoimmune diseases
 Cardiovascular diseases
 Immunodeficiency
 Infection
 Nervous system diseases
 Parkinson's disease

(treatment of; purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)

- IT 167976-41-2P, Apopain, prepro- (human) 169443-82-7P 183907-49-5P, Apopain, pro- (human) 183907-50-8P, Apopain (human subunit p17)
 RL: BPR (Biological process); PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (amino acid sequence; purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT 183966-65-6P
 RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (chem. synthesis of Ac-DEVD-CHO inhibitor; purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT 2791-79-9, L-Aspartic acid dibenzyl ester 25952-53-8 30925-18-9
 RL: RCT (Reactant)
 (chem. synthesis of Ac-DEVD-CHO inhibitor; purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT 13574-13-5P 80974-42-1P 88224-01-5P, L-Valine allyl ester 160806-33-7P 183966-66-7P 183966-68-9P 183966-70-3P 183966-73-6P 183966-75-8P 183966-77-0P 183966-79-2P 184179-08-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
 (chem. synthesis of Ac-DEVD-CHO inhibitor; purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT 169332-60-9
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (inhibitor; purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT 143313-51-3
 RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
 (purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT 169592-56-7P, Apopain 169592-57-8P, Apopain, prepro-
 RL: BPR (Biological process); PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)
- IT 169332-61-0
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (reagent for apopain assay; purifn. and characterization of the human pro-apoptotic cysteine proteinase, apopain, and its modulation by peptidyl inhibitors or gene therapy)

L79 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 1996:637064 HCAPLUS

DN 125:266051

TI Homology of interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and inhibition of cell death

IN Horvitz, H. Robert; Yuan, Junying; Shaham, Shai

PA Massachusetts Institute of Technology, USA
 SO PCT Int. Appl., 138 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K038-55
 ICS A61K038-02; A61K038-07
 CC 1-12 (Pharmacology)
 Section cross-reference(s): 3, 7, 15
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9625946	A1	19960829	WO 1996-US2473	19960223
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR				
	US 5962301	A	19991005	US 1995-394189	19950224
	AU 9651336	A1	19960911	AU 1996-51336	19960223
PRAI	US 1995-394189		19950224		
	US 1992-897788		19920612		
	US 1992-984182		19921120		
	US 1994-282211		19940711		
	WO 1996-US2473		19960223		

AB Human interleukin-1.beta. convertase (ICE) is structurally similar to the protein encoded by the *Caenorhabditis elegans* cell death gene *ced-3*. The nematode *ced-3* gene was cloned, sequenced, and characterized by standard techniques of mol. biol. The *ced-3* gene has 7 introns with range in size from 54 to 19985 bp, and the *ced-3* transcript was trans-spliced to a *C. elegans* splice leader SL1; the gene encodes a putative protein of 503 amino acids which was very hydrophilic with no significantly hydrophobic region which might be a transmembrane domain. Comparative and mutational analyses of the *ced-3* and ICE proteins, together with previous observations, suggest that the Ced-3 protein may be a cysteine protease like ICE and that ICE may be a human equiv. of the nematode cell death gene. Another mammalian protein, the murine NEDD-2 protein, was also found to be similar to Ced-3. The NEDD-2 gene is implicated in the development of the murine central nervous system. On the basis of these findings, novel drugs for enhancing or inhibiting the activity of ICE, *ced-3*, or related genes are provided. ICE inhibitors such as the **peptide aldehyde** Ac-Tyr-Val-Ala-Asp-CHO or **peptide** chloromethylketone arrest the programmed cell death of chick spinal motoneurons in vitro and in vivo. Such drugs may be useful for treating inflammatory diseases and/or diseases characterized by cell deaths, as well as cancers, autoimmune disorders, infections, and **hair growth and hair loss**. Furthermore, such drugs may be useful for controlling pests, parasites, and genetically engineered organisms. Furthermore, novel inhibitors of the activity of *ced-3*, ICE, and related genes are described which comprise portions of the genes of their encoded products. The *ced-3* protein contg. a Cys358.fwdarw.Ala mutation can prevent programmed cell death in *C. elegans*.

ST cell death inhibition *ced3* homolog *Caenorhabditis*; gene *ced3* sequence cell death *Caenorhabditis*; interleukin convertase homol *ced3* NEDD2 protein

IT Gene, animal
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
 (ICE; homol. of human interleukin-1.beta.-convertase with *Caenorhabditis elegans ced-3* and mouse NEDD-2 and inhibition of cell death)

IT Gene, animal
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
 (NEDD-2; homol. of human interleukin-1.beta.-convertase with

- Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Proteins, specific or class, biological studies
 RL: BAC (Biological activity or effector, except adverse); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (gene NEDD-2; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Proteins, specific or class, biological studies
 RL: BAC (Biological activity or effector, except adverse); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (gene ced-3; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Proteins, specific or class, biological studies
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (gene cmrA, from cowpox virus; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Apoptosis
 Caenorhabditis elegans
 Deoxyribonucleic acid sequences
 Inflammation inhibitors
 Protein sequences
 (homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT **Alopecia**
 Infection
 Parkinsonism
 (treatment of cell death in; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Gene, animal
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
 (ced-3, homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Virus, animal
 (cowpox, CrmA protein as ICE proteinase inhibitor of programmed cell death; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Nerve, disease
 (degeneration, treatment of cell death in; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Nervous system
 (disease, Friedreich's ataxia, treatment of cell death in; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Nervous system
 (disease, Huntington's chorea, treatment of cell death in; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Nervous system
 (disease, amyotrophic lateral sclerosis, treatment of cell death in; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Nervous system
 (disease, autosomal dominant pure cerebellar ataxia, treatment of cell death in; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Spinal cord

- (disease, injury, treatment of cell death in; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Nervous system
(disease, spinocerebellar degeneration, treatment of cell death in; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Heart, disease
(infarction, treatment of cell death in; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Brain, disease
(injury, treatment of cell death in; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Nerve
(motor, inhibition of cell death of; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT **Aldehydes**, biological studies
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**peptide**, homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT Brain, disease
(stroke, treatment of cell death in; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT 138862-09-6 154690-50-3 154690-61-6, Protein NEDD 2 (mouse reduced)
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(amino acid sequence; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT 154250-55-2 154250-83-6 154250-84-7 154690-52-5 154690-55-8
154690-56-9 154690-57-0 154690-58-1 154690-59-2 154690-60-5
154690-73-0 154690-74-1 154690-75-2 154690-76-3 154690-77-4
182513-47-9 182513-48-0 182513-49-1 182513-50-4 182513-51-5
182513-52-6 182513-53-7 182513-54-8 182513-55-9 182513-56-0
182513-57-1 182513-58-2
RL: BAC (Biological activity or effector, except adverse); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT 122191-40-6, Interleukin 1.beta. convertase
RL: BAC (Biological activity or effector, except adverse); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT 143313-51-3 153604-27-4D, **peptide aldehydes** contg.
153604-28-5D, **peptide aldehydes** contg. 153604-29-6D,
peptide aldehydes contg. 153604-30-9D, **peptide aldehydes** contg.
153604-31-0D, **peptide aldehydes** contg. 153604-32-1D, **peptide aldehydes** contg.
153604-33-2D, **peptide aldehydes** contg.
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)
- IT 37353-41-6, Cysteine proteinase 137546-41-9, Proteinase, aspartate-specific
RL: BPR (Biological process); PRP (Properties); THU (Therapeutic use);

BIOL (Biological study); PROC (Process); USES (Uses)

(homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)

IT 138861-51-5 153517-58-9 154690-63-8 154690-64-9 154690-65-0
154690-66-1 154690-67-2 154690-68-3 154690-69-4 154690-70-7
154690-71-8 154690-72-9

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(nucleotide sequence; homol. of human interleukin-1.beta.-convertase with Caenorhabditis elegans ced-3 and mouse NEDD-2 and inhibition of cell death)

L79 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2002 ACS

AN 1994:264626 HCAPLUS

DN 120:264626

TI Inhibitors of ced-3 and related proteins

IN Horvitz, H. Robert; Yuan, Junying; Shaham, Shai

PA Massachusetts Institute of Technology, USA

SO PCT Int. Appl., 30 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C12N015-57

ICS C12N009-64; C12N015-39; A61K031-70; A61K037-02; C12Q001-68;
G01N033-577; G01N033-68

CC 7-3 (Enzymes)

Section cross-reference(s): 1, 15

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9325694	A1	19931223	WO 1993-US5705	19930614
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 672151	A1	19950920	EP 1993-915351	19930614
	R: AT, BE, CH, DE, DK, ES, FR, GB, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 08500482	T2	19960123	JP 1993-501786	19930614
PRAI	US 1992-897788		19920612		
	US 1992-984182		19921120		
	WO 1993-US5705		19930614		

AB Human interleukin-1.beta. convertase (ICE) is structurally similar to the protein encoded by the C. elegans cell death gene, ced-3. Comparative and mutational analyses of the two proteins, together with previous observations, suggest that the Ced-3 protein may be a cysteine protease like ICE and that ICE may be a human equiv. of the nematode cell death gene. Another mammalian protein, the murine NEDD-2 protein, was also found to be similar to Ced-3. The NEDD-2 gene is implicated in the development of the murine central nervous system. On the basis of these findings, novel drugs for enhancing or inhibiting the activity of ICE, ced-3, or related genes are provided. Such drugs may be useful for treating inflammatory diseases and/or diseases characterized by cell deaths, as well as cancers, autoimmune disorders, infections, and **hair growth and hair loss.**

Furthermore, such drugs may be useful for controlling pests, parasites and genetically engineered organisms. Furthermore, novel inhibitors of the activity of ced-3, ICE and related genes are described which comprise portions of the genes or their encoded products.

ST ced3 interleukin converting enzyme similarity inhibitor; nedd2 ced3 gene enzyme similarity; cysteine proteinase inhibitor CED3 ICE NEDD2; cell death control ced3 protein analog

IT Gene, animal

RL: BIOL (Biological study)

(NEDD-2, of mouse, similarity to ced-3 gene of Caenorhabditis of, in design of inhibitors of programmed cell death)

IT Alopecia
Hypoxia
Infection

- (cell death in, prevention of, cell death-inhibiting derivs. of ced-3 and related proteins for)
- IT Neoplasm inhibitors
 - Parasitocides
 - (cell proliferation-inhibiting derivs. of ced-3 and related proteins as)
- IT Proteins, specific or class
 - RL: BIOL (Biological study)
 - (gene crmA, of cowpox virus, as inhibitor of ced-3 and related proteins, for prevention of cell death)
- IT Inflammation inhibitors
 - (inhibitors of ced-3 and related proteins as, prevention of cell death in relation to)
- IT Cell proliferation
 - (inhibitors of, ced-3 and related proteins as, stimulation of cell death in relation to)
- IT Genetic element
 - RL: BIOL (Biological study)
 - (Tcl element, RFLP assocd. with, near ced-3 gene of Caenorhabditis elegans)
- IT Antibodies
 - RL: BIOL (Biological study)
 - (auto-, cells producing, inhibition of proliferation of, cell proliferation-inhibiting derivs. of ced-3 and related proteins as)
- IT Gene, animal
 - RL: BIOL (Biological study)
 - (ced-3, cloning of, similarity of gene product to interleukin 1.beta. convertase, inhibitors of ced-3 protein and convertase activity in relation to)
- IT Death
 - (cell, inhibitors of, peptides from ced-3 protein and interleukin 1.beta. converting enzyme as, gene fragments in relation to)
- IT Gene
 - RL: PREP (Preparation)
 - (chimeric, of ced-3 of Caenorhabditis elegans and lacZ of Escherichia coli, in prepn. inhibitors of ced-3 function)
- IT Virus, animal
 - (cowpox, crmA protein of, as inhibitor of ced-3 and related proteins, for prevention of cell death)
- IT Disease
 - (degenerative, cell death in, prevention of, cell death-inhibiting derivs. of ced-3 and related proteins for)
- IT Hair
 - (follicle, proliferation of, inhibition of, cell proliferation-inhibiting derivs. of ced-3 and related proteins as)
- IT Heart, disease
 - (infarction, cell death in, prevention of, cell death-inhibiting derivs. of ced-3 and related proteins for)
- IT Brain, disease
 - (injury, cell death in, prevention of, cell death-inhibiting derivs. of ced-3 and related proteins for)
- IT Aldehydes, biological studies
 - RL: BIOL (Biological study)
 - (peptide, as inhibitors of ced-3 and related proteins, for prevention of cell death)
- IT Genetic polymorphism
 - (restriction fragment length, assocd. with ced-3 gene of Caenorhabditis elegans)
- IT Brain, disease
 - (stroke, cell death in, prevention of, cell death-inhibiting derivs. of ced-3 and related proteins for)
- IT 37353-41-6, Cysteine proteinase
 - RL: BIOL (Biological study)
 - (Ced-3 protein and interleukin-1.beta.-converting enzyme and NEDD-2 protein as, stimulation and inhibition of cell death in relation to)
- IT 154250-82-5 154250-83-6 154250-84-7 154690-73-0 154690-74-1

154690-75-2 154690-76-3 154690-77-4 154690-78-5 154690-79-6
 RL: PRP (Properties); BIOL (Biological study)
 (amino acid sequence of)

IT 154690-61-6, Protein NEDD 2 (mouse reduced) 154690-61-6D, Protein NEDD 2
 (mouse reduced), amino acid-substituted analogs
 RL: PRP (Properties); BIOL (Biological study)
 (amino acid sequence of, as modulator of cell death)

IT 138862-09-6
 RL: PRP (Properties); BIOL (Biological study)
 (amino acid sequence of, similarity to ced-3 gene product of)

IT 154690-50-3
 RL: PRP (Properties); BIOL (Biological study)
 (amino acid sequence of, similarity to interleukin-1.beta. converting
 enzyme of, design of inhibitors in relation to)

IT 143313-51-3
 RL: BIOL (Biological study)
 (as inhibitor of ced-3 and related proteins, for prevention of cell
 death)

IT 154690-51-4 154690-52-5 154690-53-6 154690-54-7
 RL: BIOL (Biological study)
 (as inhibitor of ced-3 function)

IT 9031-11-2D, .beta.-Galactosidase, fusion products with ced-3 gene products
 RL: BIOL (Biological study)
 (as inhibitor of ced-3-mediated cell death)

IT 122191-40-6D, Interleukin 1.beta. convertase, amino acid substituted
 analogs
 RL: BIOL (Biological study)
 (as modulators of cell death)

IT 154690-55-8 154690-56-9 154690-57-0 154690-58-1 154690-59-2
 154690-60-5
 RL: BIOL (Biological study)
 (as stimulator of cell death)

IT 154690-48-9 154690-49-0
 RL: BIOL (Biological study)
 (in prepn. inhibitors of ced-3 function)

IT 153517-58-9
 RL: PRP (Properties); BIOL (Biological study)
 (nucleotide sequence and cloning of)

IT 138861-51-5 154690-62-7 154690-63-8 154690-64-9 154690-65-0
 154690-66-1 154690-67-2 154690-68-3 154690-69-4 154690-70-7
 154690-71-8 154690-72-9
 RL: PRP (Properties); BIOL (Biological study)
 (nucleotide sequence of)

IT 153604-27-4 153604-28-5 153604-29-6 153604-30-9 153604-31-0
 153604-32-1 153604-33-2
 RL: BIOL (Biological study)
 (peptide aldehydes contg., as inhibitors of ced-3
 and related proteins, for prevention of cell death)

IT 122191-40-6, Interleukin 1.beta. convertase
 RL: BIOL (Biological study)
 (similarity to Ced-3 gene product of Caenorhabditis elegans of, control
 of cell death in relation to)

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L125 ANSWER 1 OF 2 WPIX COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2000-686989 [67] WPIX
DNC C2000-208928
TI Identifying a compound effective in treating multiple myeloma and myeloma
bone disease, involves subjecting the compound to an assay determining its
ability to inhibit NF-kB or **proteasomal** activity.
DC B04
IN **MUNDY, G R**
PA (OSTE-N) **OSTEOSCREEN INC**
CYC 22
PI WO 2000061167 A2 20001019 (200067)* EN 22p A61K038-04
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA JP
AU 2000042040 A 20001114 (200108) A61K038-04
EP 1169049 A2 20020109 (200205) EN A61K038-04
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
ADT WO 2000061167 A2 WO 2000-US9121 20000407; AU 2000042040 A AU 2000-42040
20000407; EP 1169049 A2 EP 2000-921764 20000407, WO 2000-US9121 20000407
FDT AU 2000042040 A Based on WO 200061167; EP 1169049 A2 Based on WO 200061167
PRAI US 1999-289229 19990409
IC ICM A61K038-04
ICS A61K031-166; A61K031-40; A61P019-08
AB WO 200061167 A UPAB: 20001223
NOVELTY - Identifying a compound (I) effective in treating myeloma bone
disease involves subjecting the compound to an assay to determine its
ability to inhibit transcription factor NF-kB activity or production, or
to an assay to determine its ability to inhibit **proteasomal**
enzyme activity or production.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
following:
(1) a pharmaceutical composition for treating myeloma bone disease
comprising (I); and
(2) a method of treating myeloma bone disease by the administration
of (I).
ACTIVITY - Osteopathic; cytostatic.
Nine C57BL/KaLwRij mice were inoculated with 0.5 asterisk 106 5TGM-1
cultured myeloma cells and tumor volume was assessed by the formula Tumor
volume (cm³) = 4/3((length + width)-1)/2. The mice with tumors were
randomized into two groups and treatment was commenced on day 35. One
group has PSI injected directly into the tumors and the other group has
only vehicle injected into the tumors. The tumors in the latter group
(untreated mice) continued to grow, resulting in the mice dying between 42
and 55 days after myeloma cell inoculation. The size of the tumors in the
treated mice decreased markedly and the mice remained healthy up to 3
months after tumor inoculation, even though treatment was discontinued.
The result showed that the treated mice were alive and well with no signs
of tumor 4 months after treatment.
MECHANISM OF ACTION - Inhibitor of NF-kB activity; inhibitor of
proteasomal activity.
(I) reduces myeloma tumor volume, delays onset of limb paralysis,
decreases the viability of myeloma cells and reduces the volume of tumor
marker, IbG2b. (claimed).
USE - (I) is useful for treating multiple myeloma such as osteopenia,
osteolytic lesions, osteopetrosis, bone fracture and osteolytic bone

disease, and myeloma bone disease (claimed).

Dwg.0/6

FS CPI

FA AB; DCN

MC CPI: B04-C01A; B10-A06; B10-A12A; B14-H01; B14-H01A; B14-L06

L125 ANSWER 2 OF 2 WPIX COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2000-171065 [15] WPIX

DNC C2000-053186

TI Compound that inhibits the activity of NF-kappa B useful for enhancing bone formation.

DC B04 B05

IN GARRETT, I R; MUNDY, G R; ROSSINI, G

PA (OSTE-N) OSTEOSCREEN; (OSTE-N) OSTEOSCREEN INC

CYC 73

PI WO 2000002548 A2 20000120 (200015)* EN 37p A61K031-00

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL

OA PT SD SE SL SZ UG ZW

W: AL AM AU BA BB BG BR CA CN CU CZ EE GE HU IL IN IS JP KP KR LC LK

LR LT LV MD MG MK MN MX NO NZ PL RO SD SG SI SK TR TT US UZ VN

AU 9963109 A 20000201 (200028) A61K031-00

EP 1096924 A1 20010509 (200128) EN A61K031-00

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

ADT WO 2000002548 A2 WO 1999-US15533 19990709; AU 9963109 A AU 1999-63109 19990709; EP 1096924 A1 EP 1999-933827 19990709, WO 1999-US15533 19990709

FDT AU 9963109 A Based on WO 200002548; EP 1096924 A1 Based on WO 200002548

PRAI US 1998-113947 19980710

IC ICM A61K031-00

AB WO 200002548 A UPAB: 20000323

NOVELTY - Enhancing bone formation, treating pathological dental conditions, treating degenerative joint conditions by administration of NF-kappa B inhibitor.

DETAILED DESCRIPTION - Enhancing bone formation or treating pathological dental conditions or treating degenerative joint conditions in a vertebrate animal comprises administration of a compound that inhibits the activity of NF-kB or that inhibits **proteasomal** activity or that inhibits production of **proteasome** proteins.

INDEPENDENT CLAIMS are included for the following:

(1) treatment of a condition benefited by stimulating **hair** growth comprising administration of a compound that inhibits the activity of NF-kB or that inhibits **proteasomal** activity or that inhibits production of these proteins, and

(2) identifying a compound which enhances bone growth or stimulates **hair** growth comprising subjecting a candidate compound to an assay to assess its ability to inhibit:

(a) NF-kB activity, or

(b) the production of NF-kB, or

(c) **proteasomal** activity, or

(d) the production of enzymes with **proteasomal** activity,

where for all the inhibitory compound is identified as a compound that enhances bone growth.

ACTIVITY - Osteopathic; Endocrine-Gen.; Screening; Vulnerary. PSI (N-carbobenzoyl-Ile-Glu-(OtBu)-Ala-Leu-CHO) was assayed in vitro for calvarial bone growth. Administered at 0.1, 1 and 5 mg/kg/day, the % increase in bone area compared to control was 21.7, 35.4 and 32.1%, respectively. The 1 and 5 mg/kg/day doses produced an increase in new bone width of 19.9%.

MECHANISM OF ACTION - Antimetastatic; Nuclear-Factor-Inhibitor-Kappa-B.

USE - The method can be used for enhancing bone formation, treating pathological dental conditions, degenerative bone conditions, osteoporosis, bone fracture or deficiency, primary or secondary hyperparathyroidism, periodontal disease or defect, metastatic bone disease, osteolytic bone disease, post-plastic surgery, post-prosthetic joint surgery, and post-dental implantation, and for stimulating **hair** growth (claimed). The compounds may also be useful in wound

healing or tissue repair.

ADVANTAGE - None given.

Dwg.0/1

FS CPI

FA AB; DCN

MC CPI: B04-C01; B06-D13; B06-F05; B07-A02B; B07-D03; B10-A06; B10-A10;
B10-D02; B11-C08; B12-K04A; B14-D03; B14-N01; B14-N06; B14-N11;
B14-N17B; **B14-R02**

TECH UPTX: 20000323

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Method: The compound does not inhibit the isoprenoid pathway. The compound is lactacystin, a **peptidyl aldehyde** or PTX. The method further comprises administration of one or more agents that promote bone growth or that inhibit bone resorption such as bone morphogenetic factors, anti-resorptive agents, osteogenic factors, cartilage-derived morphogenetic proteins, growth hormones, estrogens, bis phosphonates, statins or differentiating factors.

=> d his

(FILE 'HOME' ENTERED AT 13:27:40 ON 16 APR 2002)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 13:27:51 ON 16 APR 2002

	E MG 132/CN
L1	1 S E3
	E MG 115/CN
L2	1 S E3
	E MG 101/CN
L3	1 S E3
	E C26H41N3O5/MF
L4	30 S E3 AND 46.150.18/RID AND 1/NR
L5	11 S L4 AND FORMYL
L6	8 S L5 AND LEUCYL
L7	6 S L6 NOT ISOLEUCINAMIDE
L8	5 S L7 AND PHENYLMETHOXY
	E C25H39N3O5/MF
L9	2 S E3 AND 46.150.18/RID AND 1/NR AND LEUCINAMIDE AND PHENYLMETHO
	E C20H37N3O4/MF
L10	11 S E3 AND LEUCINAMIDE AND LEUCYL
L11	5 S L10 AND FORMYL
L12	9 S L8,L9,L11 NOT L1-L3
L13	1 S 140879-24-9
L14	3 S L1-L3
	SEL RN
L15	0 S E1-E3/CRN

FILE 'HCAPLUS' ENTERED AT 13:33:36 ON 16 APR 2002

L16	241 S L14
L17	431 S MG() (132 OR 115 OR 101) OR MG132 OR MG115 OR MG101
L18	157 S CALPAIN INHIBITOR() (1 OR I)
L19	687 S L16-L18
L20	25 S L12
L21	1475 S (PEPTIDE OR PEPTIDYL) (L) (ALDEHYDE OR ALDEHYDIC)
L22	7 S (PEPTIDE OR PEPTIDYL) (L) EPOXY (L) KETONE
L23	3055 S L13
L24	4717 S PROTEASOM?
L25	304 S (26S OR 26 S) (L) (PROTEASE OR PROTEINASE)
L26	774 S MULTICATALYTIC (L) (PROTEASE OR PROTEINASE)
L27	21 S TRICORN (L) (PROTEASE OR PROTEINASE)
L28	49 S IMMUNOPROTEASOM?
L29	9 S IMMUNO PROTEASOM?
L30	105 S PROSOME
L31	2 S IMMUNOPROTEOSOM?
L32	2 S IMMUNO PROTEOSOM?

L33 5020 S L23-L32
 L34 1481 S L21,L22
 L35 694 S L19,L20
 L36 4396 S ALOPEC? OR BALD OR BALDING OR BALDNESS
 L37 3041 S SCALP?
 L38 5442 S HAIR(L) (LOSS OR LOSE OR LOSING OR LOST OR GROW? OF THIN? OR S
 E HAIR/CT
 E E31+ALL
 L39 1419 S E1,E2
 E HAIR/CT
 L40 1409 S E6,E8,E9,E13,E15,E16
 E E37+ALL
 L41 1329 S E1,E2
 E HAIR GROWTH/CT
 E E7+ALL
 E E1
 E E10+ALL
 L42 15395 S E2+NT
 E E9+ALL
 L43 18926 S E6,E5+NT
 L44 824 S E20+NT
 E HAIR/CT
 L45 603 S E24
 L46 40 S E26
 L47 73 S E32
 L48 42 S E39
 L49 56 S E42
 E E26+ALL
 L50 289 S E2
 E HAIR PREPARATION/CT
 L51 4002 S E7,E8,E9,E10,E13,E15-E23
 L52 8270 S SHAMPOO?
 E KERATIN/CT
 E E18+ALL
 E E1
 E E17+ALL
 L53 3 S L35 AND L36-L52
 L54 2 S L53 NOT HYPOXIA
 L55 7 S L33 AND L36-L52
 L56 6 S L34 AND L36-L52
 L57 12 S L54-L56
 L58 819 S (26S OR 26 S) (L) (PROTEASOM? OR PROTEOSOM?)
 L59 4 S L58 AND L36-L52
 L60 12 S L57,L59
 SEL DN 1 4 5 9 10 11 L60
 L61 6 S L60 AND E1-E6
 E MUNDY G/AU
 L62 259 S E3,E6-E10
 E GARRETT I/AU
 L63 53 S E3-E7
 L64 55 S E239
 L65 7 S E309,E310
 E GOSSINI G/AU
 E ROSSINI G/AU
 L66 80 S E3-E16
 L67 2 S L35 AND L62-L66
 L68 1 S L34 AND L62-L66
 L69 4 S L33 AND L62-L66
 L70 8 S L61,L67-L69
 E OSTEOSCREEN/PA,CS
 L71 13 S E3-E12
 L72 3 S L71 AND L33-L35
 L73 8 S L70,L72
 L74 7 S L73 AND (HAIR OR BALD? OR ALOPEC? OR SHAMPOO OR FOLLIC? OR SH
 L75 8 S L73,L74
 L76 2 S L75 AND (GROWTH FACTOR) (L) (EPIDERM? OR FIBROBLAST? OR PLATELE

L77 0 S L75 AND (PARATHYROID OR LEUKEM?)
L78 3 S L75 AND GROWTH? FACTOR?
L79 8 S L75,L76,L78
SEL HIT RN

L80 FILE 'REGISTRY' ENTERED AT 14:06:56 ON 16 APR 2002
4 S E1-E4

FILE 'REGISTRY' ENTERED AT 14:07:17 ON 16 APR 2002

FILE 'HCAPLUS' ENTERED AT 14:07:28 ON 16 APR 2002

L81 FILE 'USPATFULL, USPAT2' ENTERED AT 14:07:55 ON 16 APR 2002
284 S L19
L82 1 S L81 AND HAIR?/CT
L83 0 S L81 AND ALOPEC?/CT
L84 30 S L81 AND (HAIR OR ALOPEC? OR BALD OR BALDING OR BALDNESS OR SC
E A61K007-16/IC, ICM, ICS
E A61K007-06/IC, ICM, ICS
L85 3230 S E3-E55
L86 1 S L81 AND L85
L87 1 S L82, L86
L88 1 S L84 AND L87
L89 29 S L84 NOT L88

FILE 'BIOSIS' ENTERED AT 14:13:40 ON 16 APR 2002
L90 591 S L19
L91 1 S L90 AND (HAIR OR ALOPEC? OR BALD OR BALDING OR BALDNESS OR S
L92 6 S L90 AND 185?/CC
L93 0 S L90 AND 22020/CC

FILE 'MEDLINE' ENTERED AT 14:15:58 ON 16 APR 2002
L94 719 S L19
L95 0 S L20
L96 4151 S L33
L97 640 S L34
E HAIR/CT
E E3 ALL
E HAIR/CT
E E3+ALL
L98 14575 S E4+NT
E HAIR/CT
E E110+ALL
L99 11743 S E4+NT
E SCALP/CT
E E3+ALL
L100 5940 S E4+NT
E SCALP/CT
E E4+ALL
L101 2273 S E4+NT
L102 0 S L94-L97 AND L98-L101

FILE 'WPIX' ENTERED AT 14:18:40 ON 16 APR 2002
L103 15 S L17 OR L18
L104 354 S L21, L22
L105 115 S L24-L32, L58
L106 11977 S (P930 OR Q252)/M0, M1, M2, M3, M4, M5, M6
E A61K007-06/IC, ICM, ICS
L107 16230 S E3-E53
E A61K007-06/ICA, ICI
L108 489 S E3-E13
E A61K007:06/ICI
L109 2 S E3, E4
L110 32063 S (D08-B OR D08-B03 OR D08-B04 OR D08-B05 OR D08-B06 OR D08-B07
L111 0 S L106-L110 AND L103
L112 10 S L106-L110 AND L104

L113 2 S L106-L110 AND L105
L114 11 S L112,L113
E MUNDY G/AU
L115 21 S E3,E5
E GARRETT I/AU
L116 6 S E3,E5
L117 9 S E61
E ROSSINI G/AU
L118 7 S E3-E5
E OSTEOSCREEN/PA
L119 10 S E3,E4
L120 2 S L103-L105 AND L115-L119
L121 1 S L114 AND L120
L122 2 S L120,L121
L123 7 S L114 AND (HAIR OR ALOPEC? OR BALD?)
L124 1 S L122 AND L123
L125 2 S L122,L124

FILE 'WPIX' ENTERED AT 14:29:56 ON 16 APR 2002